

postnote

September 2004 Number 228

DRUG TESTS

The increasing availability and use of screening tests for illegal drugs is an important issue for government and the public, receiving considerable attention recently.

Drug testing may be used in the workplace, schools, the criminal justice system and privately. This briefing looks at the prevalence of drug use, the types of test currently available and their reliability, the extent of their use, and examines the issues that arise.

Use of drug testing

Workplace drug testing

Employers may use drug testing at the pre-employment stage and/or for random testing of current employees. Polls suggest that while the number of employers using drug testing in the workplace is small, it is becoming an increasingly common practice. For instance, a survey of UK employers by MORI in 2003 reported that while 4% of companies currently used tests, a majority would be more likely to test if they felt that drug use adversely affected health and safety (89%) or productivity (78%). The survey reported that 9% were planning to introduce testing in the next year. In 2003, the Chartered Management Institute reported that 16% of their members use random testing, reflecting the high proportion of respondents from safety-critical sectors.

It is widely accepted by employers and employees' bodies such as the Trades Union Congress that drug screening is of value in safety-critical occupations, such as railway workers. Some employers view drug testing as an important part of their obligation under Health and Safety legislation. In non-safety critical areas, the benefits of drug testing are less obvious. The government's drug strategy does not explicitly promote drug testing at work, but refers employers to guidance from the National Workplace Initiative¹ and from the Health and Safety Executive (HSE) that recognises the value of testing in safety-critical environments within a wider occupational health policy. The HSE guidance document 'Drug Misuse

at Work' recommends that employers draw up suitable drug (and alcohol) policies.²

Criminal justice system

Reducing drug-related crime is a key feature of the government's 10 year drug strategy introduced in 1998. Drug tests are used for evidential purposes or as a screening tool with which to refer individuals to appropriate treatment. They are central to several initiatives in the Prison Service, and the Home Office's Criminal Justice Intervention Programme including:

- Drug Treatment and Testing Orders (DTTOs). These are community sentences which enrol offenders (aged 14 and over) into supervised treatment programmes featuring regular drug tests to check that they are complying with court orders.
- Drug testing in custody and in prisons. Drugs tests are conducted in police custody when an offender has been charged with certain offences that are likely to be drug-related in order to identify people who may need treatment. Random drug testing of urine is mandatory in prisons in England and Wales to reduce drug use.
- Voluntary drug testing. Prisons also run voluntary schemes incorporating testing administered by the 'Counselling Assessment Referral Advice and Throughcare' service to support drug users in prison.
- Roadside drug screening. Impaired driving resulting from illicit and legitimate drug use is an offence under the Road Traffic Act 1988. Currently there is no Home Office approved device for roadside drug screening although specification for a device that would analyse oral fluid or sweat is being prepared.

Drug testing in schools

Drug testing has been used in the independent school sector for several years. A survey by the Headmasters' and Headmistresses' Conference in 1999, reported that nearly three-quarters of boarding schools were using some drugs tests, with most carried out by contracted laboratories. Testing is generally used to monitor pupils

who have previously been found to be using drugs, although some schools use testing as a final proof prior to expulsion. This contrasts with state schools where there is no evidence that drug tests are used. Recently-published guidance from the Department for Education and Skills (DfES) for local education authorities and headteachers suggests that the implementation of drug testing should be considered carefully.³ It encourages schools to formulate their own appropriate drugs policies and practices in consultation with staff, parents, governors, local drug services and the police and advises that this should be in the wider context of educating children about the risks, effects and consequences of drug use. One secondary state school will introduce a pilot drug testing scheme in 2005 (Box 1).

Box 1 Case Study: The Abbey School, Kent

The Abbey School will introduce random drug testing of its pupils in January 2005 following consultation with parents, governors, staff, drug testing companies, local drug action and youth offending teams and the police. The scheme has prevention of drug use and harm reduction as its main aims, and will test only those pupils who consent to the procedure. Pupils who fail the tests will be supported and not excluded. A research evaluation of the scheme, conducted by specialists who contributed to planning the project will run in parallel with the pilot to monitor its effectiveness and other outcomes. This information will be passed on to other schools who have expressed interest in this scheme.

Tests for private use

Various on-the-spot kits to test for the presence of drugs are becoming more widely available to the public, particularly via the internet. As the tests are used privately, there is little information on the numbers being used and by whom. Retail kits have one or more of the following purposes:

- To test for the presence of drug(s) in a specimen from an individual. Such kits are often targeted at parents wishing to detect drug use by their children. They may also be used by individuals to check whether they are drug-free before employment screening.
- To test for the presence of a drug in other substances. For instance, some tests can detect whether alcoholic drinks are contaminated with compounds associated with drug-assisted assault and robbery and have been used as part of awareness campaigns by some police forces. The Forensic Science Service advises that such on-the-spot tests do not give definitive results.

Drug use

Controlled drugs

The Misuse of Drugs Act 1971 and the Misuse of Drugs Regulations 1985 define controlled substances and outline the circumstances for the lawful import, production, supply, possession with the intent to supply and possession of controlled substances. Controlled medicinal and non-medicinal drugs are broadly classified into three groups (Box 2) according to the social harm that they present to the individual and society. Cannabis has recently been re-classified from a Class B to a Class C drug. The penalties for drug offences follow these classes, with Class A drug offences treated most severely.

Box 2 Classification of Controlled Drugs

Class A	Class B
Cocaine	Amphetamines
Crack	Barbiturates
Ecstasy (MDMA)	Codeine
Heroin	Methylamphetamine
LSD	Class C
Mescaline	Anabolic Steroids
Methadone	Benzodiazepines
Morphine	Cannabis
Opiates	Gammahydroxybutyrate

Prevalence

In 2002/2003, the British Crime Survey collected figures on drug use reported by householders:⁴

- 36% of 16-59 year olds reported using one or more illicit drugs in their lifetime, 13% of whom reported using a Class A substance. In the same age category, 12% reported taking an illicit drug in the last year (equivalent to approximately four million people), 3% of whom had used a Class A drug.
- Cannabis was the most frequently used drug with three million users in the last year.
- 16-24 year olds were most likely to have used an illicit drug in the last year (28%).
- Overall levels of drug use were stable when compared with data from the previous year.
- A significant gender bias is seen in adults of all ages (British Crime Survey, 2000) with men outnumbering women by a ratio of 1.8 to 1 over the year.

The British Crime Survey underestimates the prevalence of drug use as it does not survey non-householders (homeless, imprisoned, student residences). The latest survey of schoolchildren by the Department of Health (2003) reported that 21% had used drugs in the last year with 12% admitting using a controlled drug in the previous month. There was no bias for drug use with respect to gender, but increased prevalence with age. As with adults, cannabis was the most frequently used drug.

Analytical drug tests

Tests that identify whether an individual has taken or been exposed to drugs are carried out by analysis of a biological specimen. Some drug tests are available for use in an on-the-spot format and can detect one or more drugs simultaneously, whilst other tests are performed with laboratory-based analyses, (Box 3). The type of test selected for use may also depend on the biological sample that will be used for analysis. On-the-spot tests are used as a screening tool. Drug tests that are of a standard admissible as evidence, have to date been based on laboratory analysis.

Issues

Limitations of drug tests

Reliability and interpretation

The Medicines and Healthcare Regulatory Agency (MHRA) recently evaluated the analytical performance and ease of use of 16 on-the-spot devices for testing the presence of commonly used drugs in urine. They found that there was significant variation in product quality, as well as confusing labelling, terminology and instructions.⁵

Box 3 Analytical drug testing

Drug tests are performed either 'on-the-spot' giving immediate results or in the laboratory.

On-the-spot tests

These tests are generally in the form of a portable device and for convenience work by analysis of a specimen of oral fluid, sweat or urine. A binding reaction (an immunoassay) between the drug and a pre-fabricated testing strip results in a colour change that is usually displayed within minutes and indicates the presence or absence of the drug. These tests are not considered as definitive quantitative analyses because they screen for the presence or the absence of the drug, not the amount present. This technology is rapidly improving and these tests can achieve a high level of accuracy. Pupillometry is a new technique that can detect impairment through drugs, alcohol and fatigue by measuring eye responses. The eye-check device may be a beneficial screening tool in several contexts.

Laboratory-based tests

Drug screening tests are also carried out in the laboratory, enabling the use of techniques requiring sophisticated equipment for detection and interpretation. Immunoassays similar to those used in the on-the-spot tests are also performed in the laboratory and are amenable to large scale automated processes. However the technique considered by the Forensic Science Service as the 'Gold Standard' for reliable detection of drug compounds with high sensitivity is gas chromatography combined with mass spectrometry (GC/MS). The advantage of this method is that it can be used to quantify how much of a drug, or its break-down products, is present. The specificity of GC/MS may also be used to identify specific drug substances including prescribed medicines, in cases where screening tests can only indicate the presence of a drug group.

Some tests can give positive results for drugs other than those stated on the kit, or detect legitimate drug use. For example, a person who has recently taken an over-the-counter medication containing codeine may test positive in an opiates test. Users may not be aware of such problems and have to rely on information provided by the manufacturer to avoid misinterpretation of results. Certain biological specimens are better suited to particular testing contexts (Box 4). The presence of a drug in oral fluid indicates recent use whereas drugs found in the hair reflects use in recent months. A drug test cannot give a definite answer on whether someone is 'under the influence' in a manner analogous to alcohol testing, or differentiate between chronic and one-off use.

Adulteration

Some types of test specimens, particularly urine samples, are susceptible to adulteration. Tampering usually takes place by substitution or dilution of the urine and hence the drug by consuming large quantities of fluid. It is possible to test urine for tampering but users of tests may not be aware that tests may be invalid due to tampering.

Cut-off limits

Although there is no requirement for drug testing companies to use specified cut-off points for detecting drugs, many follow those recommended by the US Substance Abuse and Mental Health Services Administration.

Box 4 Testing specimens

- **Urine** – is a commonly used specimen as it is non-invasive and easy to store and process. Urine specimens are representative of the drugs that have been taken in the past few hours.
- **Oral fluid** - is convenient for on-the-spot testing, is thought to be less amenable to adulteration than urine and represents closely bloodstream drug levels.
- **Hair** - tests tend to be used for pre-employment screening to look at the history of prior drug use, but the process is time-consuming and expensive compared with tests on other types of specimen.
- **Blood** – levels of drugs in the blood are low compared with urine, where the drugs are excreted in relatively large concentrations. Health professionals must collect specimens which require careful storage and handling meaning that this is not a commonly used sample.
- **Sweat** - is non-invasive, but limited as it is difficult to obtain a sufficient amount on which to conduct an initial and potentially a second confirmatory test.

Regulation of drug testing

There is no mandatory UK regulation of drug testing services or test kit manufacturers (Box 5). Compulsory regulation or accreditation of drug testing services and kit manufacturers is recommended by the authors of the Independent Inquiry for Testing in the Workplace, the Joseph Rowntree Foundation and DrugScope.⁶ This view is supported by other organisations including some of the drug testing services and testing kit manufacturers.

Box 5 Regulatory Issues

Drug testing kits are not usually considered medical devices since they do not have a medical purpose such as the diagnosis of disease. They are thus not usually regulated under the European Directive for In Vitro Medical Diagnostic Devices (98/79/EC) by the MHRA. However, some manufacturers comply voluntarily with the EU directive. Manufacturers can be prosecuted under existing Consumer Protection and Trade Descriptions Acts if their products do not perform as intended although shortcomings of tests may not be apparent to some users.

Laboratories providing drug testing services do not have to adhere to a code of practice or regulation. However, a group of companies in association with the Forensic Science Service have drawn up a set of operational guidelines for legally defensible workplace drug testing of urine in the UK.⁷ In addition to this, drug testing laboratories can opt to apply for accreditation with the United Kingdom Accreditation Service (UKAS) which assesses the competence of the technical and managerial aspects of the screening and testing services provided by laboratories. The competence of UKAS accredited laboratories is recognised by the HSE in their guidance document on drug misuse for employers.

Effectiveness and consequences of drug testing**Workplace**

Organisations such as the Institute of Directors and DrugScope (an organisation that aims to reduce drug-related risk and to inform policy development) view testing in safety-critical sectors as acceptable. However, there is scepticism about the necessity and value of testing in non safety-critical roles as there is little evidence linking positive test results with impaired performance, reduced productivity or higher absenteeism

in the workplace.⁸ The All-Party Parliamentary Drug Misuse Group's report in 2003 on drug testing concluded that the efficacy of testing at work as a deterrent was inconclusive.⁹ This view is supported by the Independent Inquiry into Drug Testing at Work which reported that poorly managed testing can be counter-productive and have a negative impact on employee-employer relations.⁶ It argues that good management, education and support for staff is more useful, effective and less costly in dealing with drug problems, an approach adopted by the Home Office's National Workplace Initiative scheme. Drug testing in the United States is now declining, following previous widespread use as a preventative measure.

Criminal justice system

Drug tests conducted in police custody followed by routine tests as part of community sentences have been successful in referring drug users to suitable treatment schemes. A forthcoming report by the Office for National Statistics will review whether mandatory testing in prisons causes prisoners to switch from cannabis to Class A drugs. As cannabis persists in the body for much longer than heroin it has been suggested that prisoners switch to heroin in an attempt to avoid detection and punishment. Development of roadside drug screening devices will give police a valuable tool to help detect motorists whose driving is impaired through drug use. Further assessment of motorists' physical and mental co-ordination by specially trained police officers is needed to determine whether they are unfit to drive as a result.

Schools

At present, there is little evidence to determine whether testing in schools would provide a useful deterrent. The National Association of Headteachers welcomes the DfES guidelines and comments that individual schools will continue to have differing policies on how they address drug issues. Organisations such as DrugScope and Release (offering specialist advice to drug users) argue that an open and supportive learning environment does not go hand-in-hand with drug testing in schools. They view testing as an inappropriate deterrent or harm reduction tool and believe that its use sends a confusing message to children, as well as being a poor use of teaching staff and police resources. They recommend that teachers are not involved in administering the tests and question the policing of an educational environment.

At home

Similarly, the use of drugs tests by parents has raised concerns. Drug awareness organisations advise parents to think carefully before using drug testing kits on their children as they could damage trust between parent and child and hamper the efforts of campaigns to bring drug issues into the open. They suggest that a better option would be for the families to seek professional support and advice. Civil liberties groups believe that the use of these tests would infringe on a child's privacy. Manufacturers argue that the tests are a useful tool for parents to address drug use by their children.

Consent and Privacy

Information resulting from drugs tests is subject to the Data Protection Act 1998, which states that data can be obtained only where there is a lawful purpose for their collection. A draft code (2003) from the Information Commissioner on health information of employees also recommends that information from drugs tests should be obtained only when individuals have given informed consent. This requires them to be aware of the purpose of the tests and the likely outcome if the result is positive.¹⁰ It also stipulates that information from drug testing must provide evidence of real impairment at work rather than just detecting illegal drug use by employees and is '*unlikely to be justified unless it is for health and safety reasons*'.

As drugs tests may reveal private information such as the taking of prescribed medications, they may be considered an unjustifiable intrusion into privacy. Article 8 of the Human Rights Act 1998 states that everyone has a right to respect for their private and family life; drug testing has been unsuccessfully challenged through this act.

Overview

There is increasing use of drug tests and debate about the issues testing raises.

- There is widespread support for accreditation and regulation of drug testing services and kits to improve general standards of testing.
- Drugs tests vary in function and require careful interpretation if they are to be used in the best interests of all parties concerned.
- Testing is accepted in safety-critical employment and within the criminal justice system but viewed with concern in non safety-critical workplaces and schools where alternative strategies may be more effective.

Endnotes

- 1 www.businessengagement.com
- 2 www.hse.gov.uk/pubns/indg91.pdf
- 3 *Drugs: Guidance for Schools*, DfES, 2004
- 4 British Crime Survey, www.homeoffice.gov.uk/rds/pdfs2/r229.pdf
- 5 *Sixteen Devices for the Detection of Drugs of Abuse in Urine*, MHRA Evaluation Report 03078, 2003
- 6 *Independent Inquiry into Drug Testing at Work*, www.DrugScope.org.uk, 2004
- 7 *United Kingdom Laboratory Guidelines for Legally Defensible Workplace Drug Testing (Urine Drug Testing)*, www.wdtforum.org.uk
- 8 *Literature Review for the Independent Inquiry into Drug Testing at Work*, Dr R. Coomber, University of Plymouth
- 9 *Drug Testing on Trial*, All-Party Parliamentary Drug Misuse Group
- 10 *The Employment Practices Data Protection Code, Part 4: Information about Workers' Health*, Information Commissioner

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POST would like to thank Sarah Bunn for preparing this briefing.
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